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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,363	06/01/2000	Frederick J. Lalonde	1193ROUS02U	5071

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EXAMINER
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PAYNE, DAVID C

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 12/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/584,363

Applicant(s)

LALONDE ET AL.

Examiner

David C. Payne

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35

U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 13, 14-19 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claims 1, 13, 14-19 and 27 recite the limitations "said wavelength" in claim 1, "said add zone" claims 14, 16 and 27, and "drop wavelength", and "said drop zone" in claim 17, and "K" in claim 13. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 1 (insofar as it is understood), is rejected under 35 U.S.C. 103(a) as being unpatentable over Karasan et al. US 5,878,177 (Karasan).

Regarding claim 1, Karasan (Figure 4) disclosed

A photonic switch for a network comprising:

a plurality of input ports (160, 161) and a plurality of output ports (170, 171);

An optical demultiplexer (110) for separating said wavelength from an input multi-channel signal received on an input port, and directing same on an assigned ingress area along a predetermined input path;

A switching block (130) for directing a wavelength along an optical path from an assigned ingress area to an associated egress area selected from a plurality of egress areas; and

An optical multiplexer (150) for directing said wavelength from said associated egress area along a predetermined output path, and combining same into an output multi-channel signal, transmitted on a port,

Karasan does not disclose a DWDM network but rather a WDM network (e.g., col./line: 2/45-52). It would have been obvious to one of ordinary skill in the art at the time of invention to apply Karasan's photonic switch to a DWDM network since the switch retains the same functionality and is arguably more useful in a network employing even more wavelengths such as a DWDM network. Furthermore, extending the apparatus to a network with more wavelengths is merely a scaled representation of the disclosed system and as such is not considered patentable over the prior art.

7. Claims 2-12, 20-26, and 28-32 are rejected under 35 U.S.C.

103(a) as being unpatentable over Karasan et al. US 5,878,177

(Karasan) in view of Gloeckner et al. US 6,445,841 (Gloeckner).

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Regarding claims 2, 6-8, and 9-11, Karasan does not disclose  
A control unit for selecting said associated egress area and  
configuring adjust said switch fabric to direct said wavelength along  
an adaptable path between said assigned ingress area and said  
associated egress area.

Gloeckner disclosed a control unit (Figure 18 #1774) for control of  
switching units in an optical switch. It would have been obvious to  
one of ordinary skill in the art at the time of invention to apply the  
Gloeckner control unit to the Karasan apparatus for the benefit of  
being able to redirect wavelengths from input ports to output ports.

Regarding claims 3, 10 and 11, the modified invention of Karasan  
and Gloeckner disclosed a switch fabric comprising an input matrix  
with rows and columns (see Gloeckner, Figure 10B).

Regarding claim 4, the modified invention of Karasan and Gloeckner  
disclosed a system wherein said switching elements have a  
minimum of four degrees of freedom of orientation (see Gloeckner,  
Figure 15 #1550).

Regarding claim 5, the modified invention of Karasan and Gloeckner disclosed wherein said switching elements are 3-D MEMs mirrors (see Gloeckner, col./line: 9/1-15).

Regarding claim 12, Karasan disclosed where the number of input port I is equal to the number of output ports I'.

Regarding claims 20 and 21, the modified invention of Karasan and Gloeckner disclosed a configuration control module but not a connectivity map. However, it would have been obvious to one of ordinary skill in the art at the time of invention that the configuration control module disclosed in Gloeckner (col./line: 14/55-65) would need to maintain a configuration map in order to 'map' wavelengths from input ports to output ports.

Regarding claim 22, the modified invention of Karasan and Gloeckner disclosed an all-optical switch (Karasan, Figure 1 #130).

Regarding claim 23, the modified invention of Karasan and Gloeckner disclosed (Karasan) An optical demultiplexer (110) for separating said wavelength from an input multi-channel signal

received on an input port, and directing same on an assigned ingress area along a predetermined input path;

Regarding claim 24, the modified invention of Karasan and Gloeckner disclosed (Karasan) An optical multiplexer (150) for directing said wavelength from said associated egress area along a predetermined output path

Regarding claims 25, 26, 28 and 29, the modified invention of Karasan and Gloeckner disclosed a switch fabric comprising an input matrix with rows and columns (see Gloeckner, Figure 10B).

Regarding claims 30-32, the modified invention of Karasan and Gloeckner (see Karasan, Figures 3, 4, and 5) disclosed where the input and output matrices are arranged in different planes, parallel to each other and also in the same plane. Furthermore, partitioning of the switch matrix into different planes is more of an illustration rather than a design constraint and is not considered patentable over the prior art.

### ***Conclusion***




8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kaminow et al. US 5,623,356 disclosed a wavelength switch with multiplexers and demultiplexers.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (703) 306-0004. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Dcp

  
JASON CHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600